

Analysis of the dynamics of endocrine pathology in the population on the intensively pesticized territory

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Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. Analysis of ESD incidence rate (endocrine system diseases, metabolic disturbances and disorders) in child population aged 0-14 years of the Republic of Tatarstan showed that in the period from 1993-2012 there was observed a gradual increase: primary - from 9.9 to 16.2, and prevalence - from 24.3 to 40.4 cases per 1,000 children of relevant age. But the averages in the country have been drawn from 20-50-fold difference between the 45 municipalities. In many municipalities with minor fluctuations, the level of child morbidity has not changed (Kukmorsky, Nurlatsky district), in other districts there was a trend to decline (Almetyevsk from 7.1 to 1.6 cases per 1,000 children). But there are districts where the analyzed period was accompanied by a sharp rise in the primary ESD incidence (Bugulminsky) from 4.53 to 43.5 cases per 1,000 children. Cluster analysis of primary ESD incidence in children for the period of five years (2006-2010) has assigned Bugulminsky district to the cluster with the highest incidence, and Almetyevsk - to low. We have conducted a comparative analysis of the ESD incidence and the public health forming factors in Bugulminsky and Almetyevsky districts. The test districts are located in the south-east of the Republic of Tatarstan, which produces up to 91% of oil in the country. And all the previous studies in the region had been devoted to the influence of the basic industry (oil-producing) on the health of the population. Neither evaluation of agricultural factors nor their relationship to the population morbidity has been studied. Both districts have the largest share of the land area for industry, transport, energy - 3.51% (Almetyevsky) and 3.27% (Bugulminsky); the share of arable agricultural land is 68.1% and 73.0%, respectively, the population density is 80.3 persons/km² and 79.7 persons/km², respectively, and is above the republican average (55 persons/km²).

Keywords

Endocrine system diseases, Glyphosate, Pesticides